

**A new species of the genus *Rhomphaea*
(Araneae: Theridiidae) from Okayama
Prefecture, Japan, with notes on the
habitats of Japanese *Rhomphaea***

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Abstract — A new species belonging to the family Theridiidae is described from Okayama Prefecture, western Japan, under the name of *Rhomphaea annulipedis*. Habitats of five Japanese species of *Rhomphaea* are recorded.

Key words — taxonomy, *Rhomphaea*, Theridiidae, new species, habitat, Japan.

Four species of the genus *Rhomphaea*, *R. hyrcana* (Logunov & Marusik, 1990), *R. labiata* (Zhu & Song, 1991), *R. sagana* (Dönitz & Strand, 1906) and *R. tanikawai* Yoshida, 2001, have been recorded from Japan (Bösenberg & Strand 1906; Ono & Shinkai 2001; Yoshida 2001, 2003, 2009). Recently, one species of the genus *Rhomphaea* was collected at Hiruzen, Okayama Prefecture, Japan. As a result of our examination, this species is recognized as new to science. In this paper, we wish to describe it. Habitats of five Japanese species of *Rhomphaea* are also recorded. Before going further, we express our thanks to Dr. Akio Tanikawa, University of Tokyo, for his kindly communication.

Type specimen of the new species described in this paper is deposited in the collection of the Department of Zoology, National Museum of Nature and Science, Tokyo (NSMT).

For the description in this paper following abbreviations are used: ALE, anterior lateral eye; AME, anterior median eye; AME-ALE, distance between AME and ALE; AME-AME, distance between AMEs; MOA, median ocular area; PLE, posterior lateral eye; PME, posterior median eye; PME-PLE, distance between PME and PLE; PME-PME, distance between PMEs; ALE-PLE, distance between ALE and PLE.

Rhomphaea annulipedis new species
[Japanese name: Ashimadara-yarigumo]
(Figs. 1–4)

Diagnosis. This species is similar to *R. sagana* (Dönitz & Strand, 1906) in general appearances especially shape of carapace, but is distinguished from the latter by the following characteristics (those of *R. sagana* in parenthesis): 1) 3.11 mm of body length (6 to 8 mm); 2) annulated brown and yellow color of legs (without distinct annulations); and 3) short embolus of male palpus (long).

Male (holotype). Carapace with a large and long mushroom-like projection (Figs. 1–2). AME-ALE, ALE-PLE and PME-PLE short respectively. ALE smaller than the others (1:2). Clypeus nearly vertical. Leg formula, 1, 4, 2, 3. First patella and tibia 2.5 times carapace length. Abdomen projecting posteriorly, twice as long behind as anterior to spinnerets (Fig. 1). Palpus as shown in Figs. 3–4: embolus thin and straight with a small base; conductor membranous; tegulum large; distal apophysis pestle-like.

Coloration (Figs. 1–2). Basal color yellowish white. Carapace with a pair of wide paraxial black stripes and marginal black lines on posterior two-thirds part. Chelicerae, maxillae, and labium without flecks. Sternum with a pair of latero-median large black flecks. Palpus with a black ring on each femora, patellae and tarsi. Legs with three black rings on each femora; two on tibiae and metatarsi; one on tarsi; and a ventral black fleck on patellae. Abdomen with a dorsal and a pair of lateral black lines; venter with a pair of wide black flecks between epigastric area and spinnerets, and a posterior black line; and posterior part with many silver pigments and black flecks.

Measurements (in mm, ♂ holotype). Body length 3.11. Carapace length 1.32; width 0.68. Abdomen length 1.79; width 0.58; height 1.42. Length of palpus: femur 0.92; patella 0.50; tibia 0.53. Length of legs [total (femur + patella and tibia + metatarsus + tarsus)]: I 9.78 (3.68 + 3.26 + 1.84 + 1.00); II 5.34 (2.16 + 1.34 + 1.16 + 0.68); III 3.31 (1.21 + 0.95 + 0.68 + 0.47); IV 7.13 (3.05 + 2.00 + 1.34 + 0.74). Diameters: AME 0.08; ALE 0.04; PME 0.08; PLE 0.08. Distances: AME-AME 0.13; PME-PME 0.09. MOA, anterior width 0.58; posterior width 0.42; length 0.42.

Female. Unknown.

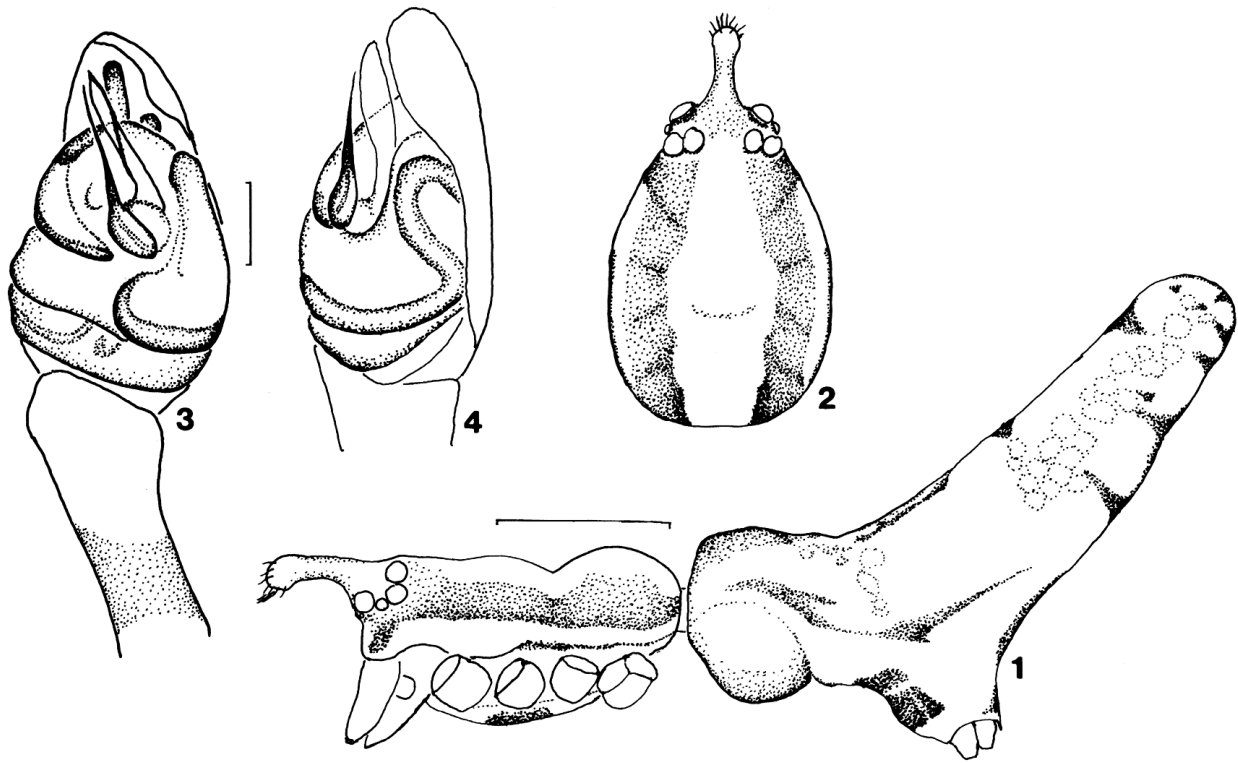
Type specimen. Holotype: ♂, Shimo-osada, Hiruzen, Maniwa-shi, Okayama Prefecture, Japan, 26–VIII–2009, K. Nojima leg. (NSMT-Ar 8386).

Distribution. Japan: Honshu (Okayama Prefecture).

Etymology. The specific name is derived from the annulated black and yellowish white colors of legs.

Habitats of Japanese *Rhomphaea*

The present new species, *Rhomphaea annulipedis*, was found at the root of a thicket of bamboo grass. *R. hyrcana* (Logunov & Marusik, 1990) collected from Kyoto and



Figs. 1–4. *Rhomphaea annulipedis* new species, male holotype. — 1, lateral view; 2, carapace, dorsal view; 3–4, left palpus, ventral (3) and retrolateral (4) views. Scales: 0.5 mm (1–2) and 0.1 mm (3–4).

Okayama Prefecture has a nearly same habitat of new species and was usually seen at the root of grass. In spite of them, two species, *R. sagana* (Dönitz & Strand, 1906) and *R. labiata* (Zhu & Song, 1991), were usually collected on a low tree. *R. sagana* is most popular among the congeners in Japan and occurs from northern Hokkaido to the Nansei Islands. Since a few years ago, *R. labiata* has been recorded nearly as same as *R. sagana* in western Japan.

According to Tanikawa (personal communication), three species, *R. tanikawai*, *R. labiata* and *R. hyrcana*, distributed in the Yaeyama Islands, most southwestern area of Japan, were collected by insect net on sweeping among branches of trees.

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